

UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

Ocado Innovation, Ltd., et al.,

v.

Civil No. 21-cv-41-JL
Opinion No. 2021 DNH 129P

AutoStore AS, et al.

MEMORANDUM ORDER

As one of many offensives in a multi-front legal battle between commercial competitors, Defendants AutoStore AS and AutoStore System, Inc. (collectively, “AutoStore”) have moved to dismiss parts of Plaintiffs Ocado Innovation Ltd. and Ocado Solutions Ltd.’s (collectively, “Ocado”) patent infringement lawsuit. The motion turns on whether one of Ocado’s patents-in-suit claims patent-eligible subject matter and whether Ocado has plead sufficient underlying facts to support claims of direct, induced, and willful infringement.

This court has subject-matter jurisdiction under [28 U.S.C. §§ 1331](#) (federal question) and [1338\(a\)](#) (patents). After careful consideration of the parties’ submissions and thoughtful presentations at oral argument, the court denies the motion. Read as a whole and in light of the detailed specification, the court is not convinced that the claims in Ocado’s ’404 Patent are directed to a patent-ineligible, abstract idea. Yet even if they were, there is a genuine factual dispute as to whether the claimed combination of elements in the patent is routine or conventional and thus lacks an inventive concept. The court therefore rejects AutoStore’s pleadings-stage invalidity challenge. As for AutoStore’s other dismissal arguments, while Ocado’s allegations of direct pre-suit knowledge of the patents-in-suit are wanting, it has plead other circumstantial proof of knowledge that is sufficient to support both induced and willful infringement claims. Ocado has also plead conduct by AutoStore that, if accepted as true and

viewed in Ocado’s favor, is sufficient to satisfy the other elements of providing direct, willful, and induced infringement claims.

I. Applicable legal standard

To defeat a [Rule 12\(b\)\(6\)](#) motion to dismiss, the plaintiff must plead “factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.” [Martinez v. Petrenko](#), 792 F.3d 173, 179 (1st Cir. 2015).¹ This standard “demands that a party do more than suggest in conclusory terms the existence of questions of fact about the elements of a claim.” [A.G. ex rel. Maddox v. Elsevier, Inc.](#), 732 F.3d 77, 81 (1st Cir. 2013). In ruling on such a motion, the court accepts as true all well-pleaded facts set forth in the complaint and draws all reasonable inferences in the Plaintiff’s favor. See [Martino v. Forward Air, Inc.](#), 609 F.3d 1, 2 (1st Cir. 2010). The court may also consider judicially noticed documents, matters of public record, and documents introduced by the plaintiff in its objection to the motion to dismiss or concessions in that objection, without converting the [12\(b\)\(6\)](#) motion into a motion for summary judgment. See [Breiding v. Eversource Energy](#), 939 F.3d 47, 49 (1st Cir. 2019); [Greene v. Rhode Island](#), 398 F.3d 45, 49 (1st Cir. 2005).

II. Background

The court recites the relevant factual background from Ocado’s Second Amended Complaint (doc. no. [35](#)) and materials referenced and incorporated therein.

¹ While district courts ordinarily apply the law of the Federal Circuit Court of Appeals in patent cases, the sufficiency of a complaint is a “purely procedural issue” that is governed by “the applicable law of the regional circuit.” [In re Bill of Lading Transmission & Processing Sys. Patent Litig.](#), 681 F.3d 1323, 1331 (Fed. Cir. 2012) (citing [McZeal v. Sprint Nextel Corp.](#), 501 F.3d 1354, 1355-56 (Fed. Cir. 2007)).

Plaintiff Ocado Solutions Ltd. is a United Kingdom entity and wholly owned subsidiary of Ocado Group plc.² Ocado Solutions conducts Ocado’s global business, including selling the “Ocado Smart Platform” technology to merchants.³ Plaintiff Ocado Innovation Ltd. is also a United Kingdom entity and wholly owned subsidiary of Ocado Group plc.⁴ Ocado Innovation is the assignee of the Asserted Patents in this lawsuit and has exclusively licensed those patents to Ocado Solutions.⁵

Ocado has developed a “cubic automated storage and retrieval system” called “the Hive” that forms a part of the Ocado Smart Platform or “OSP.”⁶ Ocado touts the OSP and Hive as an “end-to-end solution for grocery order placement, fulfillment, and delivery.”⁷ In connection with Ocado’s development of the OSP, Ocado applied for, and the United States Patent and Trademark Office issued, the four Asserted Patents here. Those Asserted Patents are U.S. Patent Nos. 9,796,080 (’080 Patent), 10,901,404 (’404 Patent), 10,913,602 (’602 Patent), and 10,961,051 (’051 Patent).

The ’602 Patent, issued on February 9, 2021 and titled “Apparatus for Retrieving Units from a Storage System,” describes an apparatus for lifting and moving containers within the storage system.⁸ The storage system is comprised of parallel rails or tracks forming a grid

² See Second Amended Complaint (doc. no. [35](#)), at ¶ 23.

³ [Id.](#)

⁴ [Id.](#) at ¶ 24.

⁵ [Id.](#) at ¶¶ 23-24.

⁶ [Id.](#) at ¶ 1.

⁷ [Id.](#)

⁸ [Id.](#) at ¶¶ 38, 40; ’602 Patent, Ex. 18 to SAC (doc. no. [35-18](#)).

pattern, a plurality of stacks of containers located beneath the rails or tracks, and a “multiplicity” of load handling devices.⁹ Each load handling device includes a wheel assembly, a container-receiving space, a lifting device, and an external housing.¹⁰

The ’051 Patent, issued on March 30, 2021 and titled “Apparatus for Retrieving Units from a Storage System,” is related to the ’602 Patent and describes a more compact load handling device, or robot, that can be used with traditional cantilever robots or pre-existing cubic automated storage and retrieval systems.¹¹ The patent describes the apparatus as two load handling devices, one of which includes a crane device comprised of a cantilever arm and a gripper plate.¹²

The ’404 Patent, issued on January 26, 2021 and titled “Methods, Systems and Apparatus for Controlling Movements of Transporting Devices” describes a system and method for controlling the movement of the devices – what Ocado refers to as robots – on the storage grid.¹³ The system contains several modules, or “units,” including a “movement optimisation¹⁴ unit,” a “reservation unit,” and a “clearance unit.” Independent Claim 1 of the ’404 Patent teaches:

1. A system for controlling movement of transporting devices arranged to transport containers, the containers being stored in stacks arranged in a facility, the facility having pathways arranged in a grid-like structure above the stacks, the

⁹ Ex. 18, Claim 1. Ocado treats Claim 1 as “exemplary” or representative of the asserted claims for the ’602 Patent. See SAC, doc. no. 35, at ¶ 43.

¹⁰ Id.

¹¹ Doc. no. 35, at ¶¶ 44, 46.

¹² ’051 Patent, Ex. 20 to SAC (doc. no. 35-20). Ocado treats Claim 1 as exemplary of the asserted claims for the ’051 Patent. See SAC, doc. no. 35, at ¶ 47.

¹³ Doc. no. 35, at ¶¶ 48-49.

¹⁴ For purposes of this order, the court adopts the spelling of “optimisation” from the patents-at-issue.

transporting devices being configured to operate on the grid-like structure, the system comprising:

a movement optimisation unit configured to determine a route of a transporting device from one location on a grid-like structure to another location on the grid-like structure for each transporting device;

a reservation unit configured to reserve a path on the grid-like structure for each transporting device based on the determined route, wherein the path reserved for each transporting device is provided such that no two transporting devices have locations on the grid-like structure which would cause transporting devices to overlap at a same time; and

a clearance unit configured to provide a clearance instruction for each transporting device to traverse a portion of the reserved path,

wherein the clearance instruction is provided for execution by a control unit on each transporting device at a future start time.¹⁵

Claims 6 and 9 of the '404 Patent – which “depend from” and therefore include all of the elements of Claim 1 – describe the system according to Claim 1, but add a configuration for the clearance unit to “grant or withhold providing clearance for a transporting device to traverse a portion of the reserved path in response to a status report received from each transporting device” (Claim 6) and add configurations for the clearance unit and movement optimisation unit “to dynamically re-plan a route of at least one transporting device” (Claim 9).¹⁶

The '080 Patent, issued on October 24, 2017 and titled “Systems and Methods for Order Processing” discloses systems and methods that optimize the picking, storing, and delivering of customer orders.¹⁷ Specifically, the '080 Patent “claims a system and method for storing delivery bins within” the cubic automated storage and retrieval system storage grid using

¹⁵ Id. at ¶57; '404 Patent, Ex. 21 to SAC (doc. no. 35-21), at 1, 25.

¹⁶ Doc. no. 35, at ¶ 57. Ocado treats Claims 1, 6, and 9 as exemplary of the of the asserted claims for the '404 Patent. See SAC, doc. no. 35, at ¶ 57.

¹⁷ Id. at ¶ 58.

existing “infrastructure to store customer deliveries in nested bin-container combinations and empty bin-container combinations” without the need for a separate order handling and sortation system.¹⁸

Exemplary Claim 23 of the '080 Patent provides:

A system for managing storage and retrieval of containers, comprising:

a storage and retrieval system including:

a structural framework defining a grid of storage locations for receiving a plurality of containers;

a plurality of robotic load handlers each configured to access any one of the storage locations in the grid of the structural framework; and

a controller configured to control at least one robotic handler in transporting at least one of the plurality of containers to/from any one of the storage locations in the grid, wherein the plurality of containers includes storage containers configured to store products to be ordered, delivery containers configured to store products at least partially fulfilling an order, and combined containers including at least one delivery container nested within a storage container.¹⁹

Thus, in high-level terms, and without adopting any construction of the claims of the patents-in-suit, the Asserted Patents work together as follows. The Hive is essentially an automated warehouse consisting of cubic grids that store product (the '602 and '051 Patents), automated transporting devices (referred to as “robots”) that traverse the grids, retrieve product from storage bins, and deliver product in containers to other parts of the grid (the '602 and '080 Patents), and communication technology that coordinates and controls the robots and delivers the bins to a hand-off point for delivery (the '404 Patent).²⁰

¹⁸ [Id.](#) at ¶¶ 60-61.

¹⁹ [Id.](#) at ¶ 62; '080 Patent, Ex. 23 to SAC (doc. no. [35-23](#)).

²⁰ [Id.](#) at ¶¶ 33-35.

Defendant AutoStore AS is a Norwegian entity that markets and sells the company's technology globally.²¹ Defendant AutoStore System Inc. is a Delaware corporation with its headquarters and principal place of business in Derry, New Hampshire. AutoStore System is a wholly owned subsidiary of AutoStore AS and markets and sells the company's technology in the United States. It also provides design, engineering, training, and other support to AutoStore's United States customers and business partners.²² AutoStore is Ocado's only competitor in the cubic automated storage and retrieval system market.²³ At some point in time, Ocado approached AutoStore about a potential business partnership and met to discuss the potential relationship (including meeting at one of Ocado's automated warehouses in the United Kingdom), but the parties never reached an agreement.²⁴

AutoStore initially sold automated storage and retrieval system technology marketed under the "Red Line" brand and in 2019, it launched a new "Black Line" system. In late 2020, AutoStore also launched a software suite for its storage systems called "the Router" to be used with both the Red Line and Black Line systems. AutoStore also shifted its focus to the online grocery industry in 2020 and began marketing its technology for use in online grocery applications.²⁵

Ocado alleges that AutoStore has infringed, and continues to infringe, its patents as follows: (1) AutoStore's Black Line system (and the "B1 Robots" within that system) infringe

²¹ [Id.](#) at ¶ 25.

²² [Id.](#) at ¶ 26.

²³ [Id.](#) at ¶ 81.

²⁴ [Id.](#) at ¶ 7.

²⁵ [Id.](#) at ¶ 20.

the '602 and '051 Patents; (2) AutoStore's Red Line and Black Line systems infringe the '404 Patent through use of the Router control system; and (3) AutoStore's Red Line and Black Line systems infringe the '080 Patent through use of a "tote-in-tote" feature, which is advertised to online grocery merchants.²⁶ Ocado further alleges that AutoStore has willfully infringed its patents and induced others to infringe its patents.²⁷

III. Analysis

AutoStore moves to dismiss some, but not all, of Ocado's claims. Regardless of the court's ruling on this motion, Ocado's direct infringement claims for the '602, '051, and '080 patents will proceed to discovery. The present motion, if granted in full, would nevertheless render the '404 Patent invalid and dispose of all infringement claims as to that patent, as well as eliminate Ocado's willful and indirect infringement claims; all told, a significant blow to Ocado's case. The court therefore eschews its customary practice of summarily addressing Rule 12(b) motions that will not effectively end the case and examines AutoStore's arguments for dismissal in detail as follows.

AutoStore moves to dismiss all infringement claims for the '404 Patent because it alleges that no asserted claims in this patent are directed to patentable subject matter and the claims are therefore invalid under [35 U.S.C. § 101](#). It also alleges that Ocado's direct infringement claims for the '404 Patent must be dismissed because Ocado has plead insufficient facts to support a direct infringement claim. AutoStore lastly argues that Ocado's willful and induced infringement claims for the all of the Asserted Patents must be dismissed because Ocado has

²⁶ [Id.](#) at ¶ 64.

²⁷ [Id.](#) at ¶¶ 80-87, 90, 98, 105, 113.

failed to allege sufficient facts that satisfy the knowledge and other required elements to support these types of claims. The court addresses AutoStore’s dismissal arguments for each patent in turn, beginning with the ’404 Patent.

A. The ’404 Patent

1. Invalidity

AutoStore focuses most of its motion to dismiss on the argument that the ’404 Patent claims ineligible subject matter and is therefore invalid under [35 U.S.C. § 101](#). Under [§ 282](#) of the Patent Act of 1952, “[a] patent shall be presumed valid” and “[t]he burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.” [35 U.S.C. § 282](#). Ocado responds that eligibility issues are premature at the [Rule 12\(b\)](#) stage in the absence of discovery or a fully-briefed claim construction process, but the ’404 Patent is nevertheless directed to patent-eligible subject matter. The court agrees with Ocado’s latter argument.

“Patent eligibility under [35 U.S.C. § 101](#) is ultimately an issue of law” but “may contain underlying issues of fact.” [Berkheimer v. HP Inc.](#), 881 F.3d 1360, 1365 (Fed. Cir. 2018). “Like other legal questions based on underlying facts,” patent eligibility “may be, and frequently has been, resolved on a [Rule 12\(b\)\(6\)](#) or [\(c\)](#) motion where the undisputed facts . . . require a holding of ineligibility under the substantive standards of law.” [SAP Am., Inc. v. InvestPic, LLC](#), 898 F.3d 1161, 1166 (Fed. Cir. 2018); see also [Content Extraction and Trans. v. Wells Fargo Bank](#), 776 F.3d 1343, 1349 (Fed. Cir. 2014) (“Although the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter, claim construction is not an inviolable prerequisite to a validity determination under [§ 101](#).”). The question of the ’404 Patent’s subject matter eligibility is not premature at this stage in the case.

The Supreme Court has formulated a two-step test for deciding patent eligibility under § 101. First, the court determines whether the claims at issue are directed to a recognized patent-ineligible concept such as laws of nature, natural phenomena, or abstract ideas. See [Alice Corp. Pty. Ltd. v. CLS Bank Int'l](#), 573 U.S. 208, 217 (2014) (citing [Mayo Collaborative Servs. v. Prometheus Labs., Inc.](#), 566 U.S. 66, 77-78 (2012)). To do so, the court looks to the claim language and the specification, which is “useful in understanding ‘the problem facing the inventor’ as well as what the patent describes as the invention.” [ChargePoint, Inc. v. SemaConnect, Inc.](#), 920 F.3d 759, 767 (Fed. Cir. 2019), cert. denied, 140 S. Ct. 983 (2020); see also [Chamberlain Grp., Inc. v. Techtronic Indus. Co.](#), 935 F.3d 1341, 1346 (Fed. Cir. 2019) (“[T]he specification [is] helpful in illuminating what a claim is ‘directed to.’”) (alterations in original) (citation omitted); [Enfish, LLC v. Microsoft Corp.](#), 822 F.3d 1327, 1335 (Fed. Cir. 2016) (“Rather, the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’”) (citation omitted). The court may also consider the relevant prosecution history²⁸ and other intrinsic evidence at step one. See [CardioNet, LLC v. InfoBionic, Inc.](#), 955 F.3d 1358, 1372 (Fed. Cir. 2020), cert. denied sub nom. InfoBionic, Inc. v. Cardionet, LLC, 141 S. Ct. 1266 (2021) (“[Alice](#) step one presents a legal question that can be answered based on the intrinsic evidence.”). If the claim is directed to a patent-ineligible concept, the court proceeds to step two and “examine[s] the elements of the claim to determine whether it contains an ‘inventive

²⁸ While the parties agree there is some prosecution history for the ’404 Patent, they dispute whether that history is relevant to the pending eligibility issue. The court need not decide who has the better argument, as it does not rely on the prosecution history in deciding AutoStore’s motion.

concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application. [Alice](#), 573 U.S. at 221 (quoting [Mayo](#), 566 U.S. at 72).

AutoStore contends generally that the ’404 Patent is directed to the abstract idea of routing vehicles, that is, (1) finding routes for vehicles, (2) reserving paths while ensuring that the vehicles do not collide, and (3) instructing the vehicles to proceed on the path one segment at a time. These allegedly “basic traffic management concepts,” AutoStore argues, can be performed in the human mind or with pen and paper and are therefore unpatentable abstract ideas.²⁹ At step two, AutoStore asserts that the claims do not contain inventive concepts that improve the functioning of a computer or any other technology; instead, using generic computer components, they merely automate a mental process. Ocado counters that AutoStore’s characterization of the invention as “vehicle routing” is oversimplified and too broad an abstraction of the claims. Viewed in their complete context, Ocado contends that the claims describe a system that contains vast improvements over the prior art and existing technological systems.

Alice Step One. The “Supreme Court has not established a definitive rule to determine what constitutes an ‘abstract idea.’” [Enfish, LLC](#), 822 F.3d at 1334. It has, however, identified algorithms, mathematical formulae, “fundamental economic practice[s] long prevalent in our system of commerce,” and other “method[s] of organizing human activity” as impermissibly abstract. [Alice](#), 573 U.S. at 218-20 (citing [Bilski v. Kappos](#), 561 U.S. 593, 599 (2010)). For technology involving computers like the ’404 Patent, the step-one analysis often hinges on “whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked

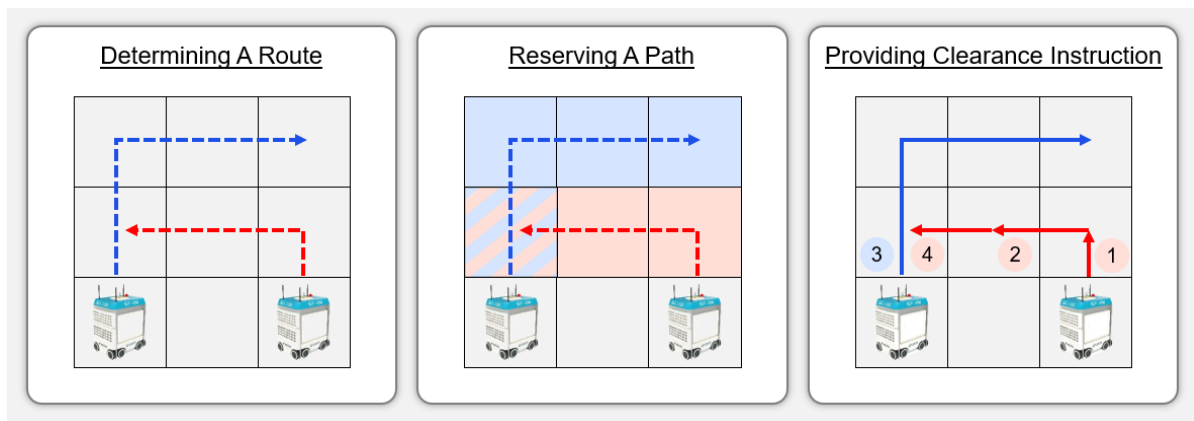
²⁹ See Memo. of Law in Supp. of Partially Renewed Mot. to Dismiss (doc. no. [36-1](#)), at 7, 15.

merely as a tool.” [Enfish](#), 822 F.3d at 1336. Said differently, at step one, courts determine whether a patent’s claimed advance represents a concrete “technological solution to a technological problem.” [Packet Intelligence LLC v. NetScout Sys., Inc.](#), 965 F.3d 1299, 1309 (Fed. Cir. 2020); see also [SRI Int’l, Inc. v. Cisco Sys., Inc.](#), 930 F.3d 1295, 1303 (Fed. Cir. 2019) (same). “[C]laims ‘purport[ing] to improve the functioning of the computer itself,’ or ‘improv[ing] an existing technological process’ might not succumb to the abstract idea exception.” [Enfish](#), 822 F.3d at 1335 (quoting [Alice](#), 573 U.S. at 223-25) (emphasis added).³⁰

Relying principally on the claim language, AutoStore first argues that the ’404 Patent is directed to an abstract idea because it recites steps that can be performed in the human mind, with the aid of pen and paper. See [Elec. Power Grp., LLC v. Alstom S.A.](#), 830 F.3d 1350, 1354 (Fed. Cir. 2016) (“In a similar vein, we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.”). It likens the “vehicle routing” decisions in the patent to people driving to work in densely packed cities or presidential motorcades conducting basic “path-planning steps.”³¹ This argument and analogy, however, presume that the patent is limited to an embodiment with just two transporting devices, as shown in the following graphic:

³⁰ The parties agree that the court need not treat certain claims as representative for the eligibility analysis, however, AutoStore suggested at oral argument that the court could treat Claims 1 and 20 as representative.

³¹ At oral argument, AutoStore’s counsel also analogized the route planning decisions in the ’404 Patent to a chess player moving her pieces throughout the board; decisions he says humans have been making for hundreds of years.



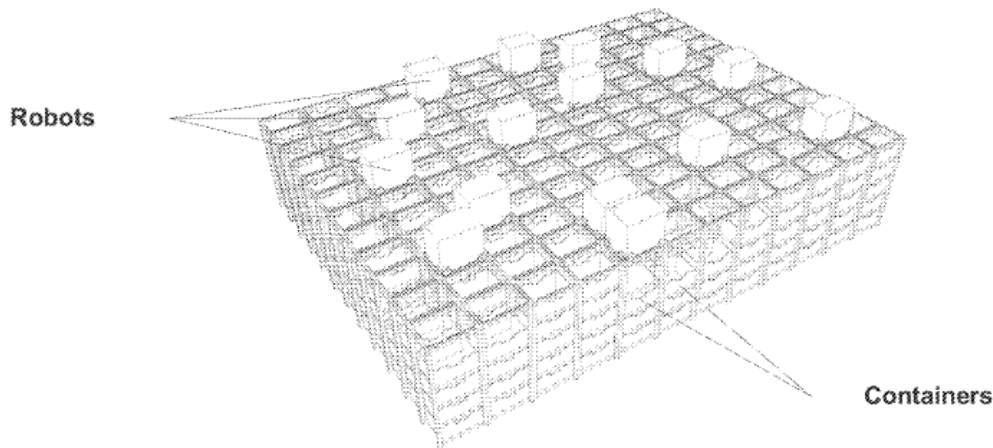
Ocado acknowledges that the claims could be read as including as few as two robots. It argues, however, that the patent was not intended to operate a system of two robots but rather a fully automated system with potentially hundreds of robots working in real time, around the clock. Ocado nevertheless contends that even if the patented system was intended to run with only two robots, the functions of that system could not be carried out in the human mind because the system requires constant monitoring of the robots in case they deviate from normal behavior and organize automated computerized activity, rather than human activity.

The court agrees generally with Ocado that AutoStore’s human mind argument oversimplifies the invention, relies too heavily on the language of Claim 20, and ignores the other claims and the details about the invention in the specification.³² Independent Claim 1, for example, includes a “movement optimisation unit,” a “reservation unit”, and a “clearance unit,” which Ocado alleges are the “core” of the invention. If the patent were only concerned with two robots on a grid, there would be no need to invent a system containing these separate computerized modules for planning and reserving routes and providing clearance instructions.

³² The parties agree that the court can rely on the specification at both stages of the [Alice](#) analysis.

Several dependent claims also teach specific automated functions or features of these units within the system in Claim 1. AutoStore does not argue that a human could operate these units or perform these additional functions or features. Instead, it suggests that the units are “generic computer components,” and the use of such generic components cannot transform an abstract idea into a patent-eligible concept. The specification belies this argument. It describes the three units themselves not in generic terms, but with detailed potential configurations.³³ See [Chamberlain Grp., Inc., 935 F.3d at 1346](#) (“[T]he specification [is] helpful in illuminating what a claim is ‘directed to.’”) (alterations in original) (citation omitted).

Likewise, the specification describes embodiments of the invention containing multiple robots in a fully automated system operating in real time, with little to no human intervention. One representative figure from the patent also depicts multiple robots on the grid:



³³ See, e.g., '404 Patent, Col. 14, line 33 – Col. 16, line 27 (describing embodiments of movement optimisation unit); Col. 18, line 31 – Col. 19, line 29 (describing embodiments of clearance unit or “module”); Col. 19, lines 30 – 57 (describing embodiments of reservation unit or “module”).

'404 Patent, Fig. 7, doc. no. [35-21](#), at 11. Based on the specification, the problem facing the inventor was not how to control two robots on a grid. See [ChargePoint, Inc.](#), 920 F.3d at 767 (noting that the specification is useful in understanding “the problem facing the inventor”).

The court is not convinced that the control system described in the '404 Patent can be performed “entirely” in the human mind and is thus not persuaded by AutoStore’s analogies to human activities. See [CyberSource Corp. v. Retail Decisions, Inc.](#), 654 F.3d 1366, 1373 (Fed. Cir. 2011) (“[C]omputational methods which can be performed entirely in the human mind are the types of methods that embody the ‘basic tools of scientific and technological work’ that are free to all men and reserved exclusively to none.”) (emphasis added) (quoting [Gottschalk v. Benson](#), 409 U.S. 63, 67 (1972)). Based on the other, preferred embodiments of the invention as well as the problems confronting the inventor, the more-apt analogy would be a person trying to drive 50 cars at once in a crowded city grid without crashing them, or the technology used to control traffic signals or traffic lights in that same crowded city grid. The court cannot say that a human would be able to perform either of these tasks entirely in her mind. Cf. [CyberSource Corp.](#), 654 F.3d at 1373 (noting that it is permissible to claim some “mental method steps as part of a process containing non-mental steps” without rendering the claims abstract).

AutoStore next argues that the claims are directed to a result or a solution that is an abstract idea, without providing the required specificity about how to achieve that result. See [SAP Am., Inc. v. InvestPic, LLC](#), 898 F.3d 1161, 1167–68 (Fed. Cir. 2018) (courts have “repeatedly” held that “a claim must “ha[ve] the specificity required to transform [the] claim from one claiming only a result to one claiming a way of achieving it” to avoid ineligibility); [Interval Licensing LLC v. AOL, Inc.](#), 896 F.3d 1335, 1343 (Fed. Cir. 2018) (a claim is ineligible if it “fail[s] to recite a practical way of applying an underlying idea . . . [and] instead [is] drafted

in such a result-oriented way that [it] amount[s] to encompassing ‘the principle in the abstract’ no matter how implemented”). AutoStore’s argument about result-oriented claiming suffers from the same defect as its human mind argument; it focuses too narrowly on excerpts from the claim language and ignores the specification almost entirely.

Drawing “all factual inferences . . . from the specification” in favor of Ocado, the court finds that the specification provides additional details that expand upon, and are consistent with, the claim language, about how the invention achieves its desired results.³⁴ [CardioNet](#), 955 F.3d at 1369. The ’404 Patent is therefore not so results-oriented to render it directed to an abstract idea. In any event, the Federal Circuit has found that the question of “how to implement the claimed invention” is “an enablement issue under 35 U.S.C. § 112, not an eligibility issue under § 101.” [Visual Memory LLC v. NVIDIA Corp.](#), 867 F.3d 1253, 1260-61 (Fed. Cir. 2017).

AutoStore is free to challenge the ’404 Patent on enablement or definiteness grounds at a later stage in the case. But to the extent it argues that such alleged indefiniteness renders the invention subject matter ineligible, the court rejects that argument.

Finally, AutoStore argues that Ocado cannot overcome an eligibility challenge simply because the ’404 Patent is limited to the context of a grid-style storage system. See [Bot M8 LLC v. Sony Corp. of Am.](#), 465 F. Supp. 3d 1013, 1025 (N.D. Cal. 2020), [aff’d](#), No. 2020-2218, 2021 WL 2932690 (Fed. Cir. July 13, 2021) (“[L]imiting [claim 1] to the particular technological environment of [gaming machines] is, without more, insufficient to transform [it] into [a] patent-eligible application[] of the abstract idea at [its] core.”) (quoting [Elec. Power Grp.](#), 830 F.3d at 1354). While the court agrees that limiting the invention to a discrete technological context,

³⁴ See, e.g., ’404 Patent, Col. 14, line 33 – Col. 16, line 27; Col. 18, line 31 – Col. 19, line 29; Col. 19, lines 30 – 57; Col. 1, lines 63-67; Col. 2, lines 29-37; Col. 9, lines 46-58; Col. 13, lines 15-23; Col. 22, lines 13-25.

without more, does not render it eligible for patent protection, here, Ocado's allegations are not so limited.

Specifically, Ocado alleges that the '404 Patent improves an existing technological process in the context of a grid-style storage system. According to Ocado and its expert, the patent does not improve the ability of human operators to control and communicate with robots in a grid storage system (a process that may be ineligible because it merely automates human activity). Instead, it teaches a computerized control system that improves and optimizes the functioning of a fully automated storage system and addresses problems that arise only in that context.³⁵ In this system, machines control the robots, not humans.³⁶ Based on the specification, Ocado further argues that the patent solves specific technological problems associated with operating a fully automated stacked-bin, grid-style storage system (i.e., it provides new solutions to new or prior problems, and does not just use computers or generic technology to improve an existing system).³⁷

AutoStore rejoins that Ocado's argument improperly reads in limitations or requirements from the specification that the claims do not have. See [ChargePoint, Inc.](#), 920 F.3d at 769

³⁵ See, e.g., SAC, doc. no. [35](#), at ¶¶ 49-56; '404 Patent, doc. no. [35-21](#), at Col. 1, lines 20-26; Col. 3, line 11 ("In some embodiments, the system further comprises one or more utilities configured to optimise the movement and actions of one or more transporting devices through the plurality of pathways.") (emphasis added).

³⁶ See, e.g., doc. no. [35-21](#), at Col. 3, lines 1-25, Col. 4, lines 11-14.

³⁷ See [id.](#), at Col. 1, line 63 ("The co-ordination of the movement of one or more robotic or otherwise automated means may be an important consideration in determining the overall efficiency and scalability of a system for storage and retrieval of a large number of different products."); Col. 2, line 29 ("There is a need, therefore, for systems and processes for coordinating and controlling product movement."); Col. 4, line 14 ("In various aspects, the disclosure provides improvements in the coordination and control of the movement of robots handling a variety of goods in fulfillment of orders which, in some instances, may include a variety of items having different sizes, weights, fragilities and other characteristics.").

(“[T]he specification cannot be used to import details from the specification if those details are not claimed.”). The patent’s more-generalized claim language, however, can be read as including the details or embodiments discussed in the specification. That is what it means to read the claims “in light of the specification.” See [CardioNet](#), 955 F.3d at 1367-69 (noting the “important” role the specification plays in “inform[ing] [the court’s] understanding of the claims” and determining how “the claimed invention achieves multiple technological improvements” over the prior art.”). At a minimum, the details in the specification are not inconsistent with the claim language. See [Enfish](#), 822 F.3d at 1337 (“Moreover, our conclusion that the claims are directed to an improvement of an existing technology is bolstered by the specification’s teachings that the claimed invention achieves other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements.”) (citing [Openwave Sys., Inc. v. Apple Inc.](#), 808 F.3d 509, 513–14 (Fed. Cir. 2015)). The court can therefore use the ’404 Patent’s specification to understand what the invention is directed to at step one of the [Alice](#) inquiry.

Several dependent claims also “further specify the physical features or operation” of the control system in Claim 1. [CardioNet, LLC](#), 955 F.3d at 1369. For example, dependent Claims 2 through 4 and 6 through 8 explain additional features of the clearance unit. Dependent Claim 7 claims a configuration of the clearance unit as a “passive collision avoidance system,” which, according to Ocado’s expert, is an improvement over the prior art and existing control system technology utilized at the time of the invention. And dependent Claim 9 explains that the system may be configured to “dynamically re-plan a route of at least one transporting device,” also an advantage or improvement over the prior art. Other dependent claims also explain features of the invention where issues arise, such as when robots lose communication with the system (Claim 5)

or the system does not receive a message from a robot (Claim 10). In sum, these dependent claims (and others) narrow the system’s “specific technical features or operations” and provide the requisite “technological specificity” to survive an eligibility challenge on the pleadings.

[Fortinet, Inc. v. Forescout Techs., Inc.](#), No. 20-CV-03343-EMC, 2021 WL 2412995, at *13 (N.D. Cal. June 14, 2021).

When read as a whole, and in light of the specification, the court cannot conclude at the pleadings stage that the ’404 Patent is directed to an abstract idea. As just explained, the claims “focus on a specific means or method that improves” grid-style automated storage control system technology; they are not “directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.” [CardioNet, LLC](#), 955 F.3d at 1368 (quoting [McRO, Inc. v. Bandai Namco Games America, Inc.](#), 837 F.3d 1299, 1314 (Fed. Cir. 2016)); see also [Alice](#), 573 U.S. at 223 (claims may be patent eligible if they improve “an existing technological process”).³⁸

AutoStore also fails to identify any analogous patents (control systems for robots or other automated devices or technology) that courts have invalidated as abstract ideas. That is

³⁸ The court views the ’404 Patent as more analogous to the patent in [Diamond v. Diehr](#) for a process of curing natural or synthetic rubber. There, the court found that the patented process, which incorporated computers, “significantly lessen[ed] the possibility of ‘overcuring’ or ‘undercuring’ the rubber, which was an improvement over the prior art.” 450 U.S. 175, 187 (1981). The court further concluded that the claim was “drawn to” patent-eligible subject matter and did not become ineligible “simply because it use[d] a mathematical formula, computer program, or digital computer.” *Id.*; see also [Thales Visionix Inc. v. United States](#), 850 F.3d 1343, 1348–49 (Fed. Cir. 2017) (ruling that an improvement to a physical tracking system was not directed to an abstract idea because it used mathematics achieve the improvement). Here, at least according to the specification and Ocado’s complaint, which the court must accept as true and construe in Ocado’s favor, the patented system optimizes and improves existing systems of controlling and coordinating robot movement in an automated grid storage system. This, in turn, allows the robots to move dynamically, more-efficiently, with fewer collisions, and at higher speeds than prior systems.

significant, but not dispositive, because the step-one analysis often involves “compar[ing] claims at issue to those claims already found to be directed to an abstract idea in previous cases.”

[Enfish](#), 822 F.3d at 1334. AutoStore instead attempts to analogize the ’404 Patent to cases where patents for targeted advertising, “intermediated settlement systems,” wearable content players with remote controls, and graphical displays of data were found abstract. *See, e.g., Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355 (Fed. Cir. 2021); *Fast 101 Pty Ltd. v. CitiGroup, Inc.*, 834 F. App’x 591 (Fed. Cir. 2020) (unpublished); *Interactive Wearables, LLC v. Polar Electro Oy*, 501 F. Supp. 3d 162 (E.D.N.Y. 2020); *Teradata US, Inc. v. SAP SE*, No. 20-cv-06127-WHO, 2021 WL 326930 (N.D. Cal. Feb. 1, 2021). These inventions are distinguishable from the control system claimed in the ’404 Patent and not especially useful here.³⁹

“[T]he concern that drives” the subject matter eligibility analysis is “one of pre-emption,” since granting “a monopoly over an abstract idea” would “pre-empt use of [the idea] in all fields” and thus “impede innovation more than it would tend to promote it.” [Alice](#), 573 U.S. at 216 (internal citations omitted). Given the language in Claim 1 and the specification limiting the ’404 Patent to the context of robots operating in a grid-style, stacked bin storage system, there appears to be little risk of preempting the idea of vehicle routing or traffic planning and collision avoidance in all fields. AutoStore seems to agree.⁴⁰ Indeed, Ocado’s counsel suggested at oral

³⁹ At oral argument, AutoStore’s counsel suggested that the court invalidated an analogous method patent claim in [Palomar Technologies, Inc. v. MRSI Systems, LLC](#), 462 F. Supp. 3d 13, 24 (D. Mass. 2020) (Saylor, C.J.). That patent, however, was directed to the abstract idea of placing an item at a final location more accurately by first moving it to an intermediate location and not limited to any specific context. By contrast, the ’404 Patent is expressly limited to the context of a grid-like storage system with robots arranged to transport containers, and not “an almost infinite breadth of applications” as the patent in [Palomar](#). 462 F. Supp. 3d at 25.

⁴⁰ *See* AutoStore Reply, doc. no. 43, at 9 (“AutoStore does not argue that the claims would preempt ‘vehicle routing’ or ‘traffic planning and collision avoidance’”).

argument that one could devise “potentially hundreds” of control systems that would not infringe the ’404 Patent. How that statement will bode for Ocado’s infringement claims in this case remains to be seen. Nevertheless, the ’404 Patent does not implicate the preemption concerns articulated in [Alice](#) and other cases.

The court must also avoid the temptation to overgeneralize the claims in such a way that would render most claims abstract ideas, which [Alice](#) cautions against. See [Alice](#), 134 S. Ct. at 2354 (noting that “we tread carefully in construing this exclusionary principle [of laws of nature, natural phenomena, and abstract ideas] lest it swallow all of patent law”); [Diehr](#), 450 U.S. at 189 n. 12 (cautioning that overgeneralizing claims, “if carried to its extreme, make[s] all inventions unpatentable because all inventions can be reduced to underlying principles of nature which, once known, make their implementation obvious”); [Enfish](#), 822 F.3d at 1337 (“[D]escribing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.”).

The court declines to hold, at this time, that the ’404 Patent is directed to an abstract idea. The court stresses that this ruling is based on the pleadings and limited record before it. With the benefit of discovery, claim construction, and expert testimony, AutoStore may raise similar or additional ineligibility arguments, and denial of its motion to dismiss is without prejudice to AutoStore’s ability to renew these arguments at a later stage of the case.

Alice Step Two. At step two, the necessary showing is different and the required quantum of proof is more burdensome. Even if the court were to find that the ’404 Patent is directed to an abstract idea, AutoStore has not met its burden of proving that the claimed invention is routine or conventional to skilled artisan in this industry. The essential inquiry at step two is whether “the elements of [a] claim both individually and ‘as an ordered

combination” go beyond “‘well-understood, routine, conventional activit[ies]’ previously known to the industry.” [Alice](#), 573 U.S. at 217, 225 (quoting [Mayo](#), 566 U.S. at 79, 73); see also [Berkheimer](#), 881 F.3d at 1367 (“The second step of the [Alice](#) test is satisfied when the claim limitations involve more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’”). AutoStore must prove this fact-based question by clear and convincing evidence. [Berkheimer](#), 881 F.3d at 1368; see also [Microsoft Corp. v. i4i Ltd. P’ship](#), 564 U.S. 91, 95 (2011). Only “[w]hen there is no genuine issue of material fact regarding whether the claim elements or claimed combination is well-understood, routine, [or] conventional to a skilled artisan in the relevant field . . . can [eligibility] be decided . . . as a matter of law” on a motion to dismiss or at summary judgment. [Berkheimer](#), 881 F.3d at 1368. “In other words, if there is a genuine dispute as to whether the claimed combination of elements is routine or conventional to a skilled artisan in the field, a motion to dismiss . . . must be denied.” [Fortinet, Inc.](#), 2021 WL 2412995, at *5.

A claim may exhibit an inventive concept where it is addressed to “a technical solution to a problem unique to” the relevant field. [BASCOC Glob. Internet Servs., Inc. v. AT&T Mobility LLC](#), 827 F.3d 1341, 1351 (Fed. Cir. 2016); see also [Aatrix Software, Inc. v. Green Shades Software, Inc.](#), 882 F.3d 1121, 1127 (Fed. Cir. 2018) (finding an inventive concept where the complaint “present[ed] specific allegations directed to ‘improvements and problems solved by the . . . patented inventions.’”). Such a solution should “explain[] how [the] particular arrangement of elements” is “a technical improvement over prior art . . .” [Amdocs \(Israel\) Ltd. v. Openet Telecom, Inc.](#), 841 F.3d 1288, 1299 (Fed. Cir. 2016). AutoStore argues that neither the independent nor dependent claims add any elements that would provide an inventive concept.

This argument again overlooks the specification and the allegations from Ocado's complaint, which the court must accept as true at this stage in the case.

Ocado counters that, as alleged in its complaint and reflected in the specification, at least two elements of Claim 1 (the reservation unit and clearance unit) were not well understood, routine, or conventional at the time of the invention⁴¹ (mid-2014) and offer inventive concepts that would transform an otherwise abstract idea into patent-eligible subject matter. Specifically, it argues that the reservation unit was inventive in 2014 because prior control systems for automated warehouse storage did not plan and reserve conflict-free routes for robots from start to destination. Instead, they utilized "active" collision avoidance, planned a robot's route without accounting for the other robots, and relied on other systems (like motion sensors) to avoid collisions. The patent therefore teaches a more reliable and efficient system using "passive" collision avoidance technology. For the clearance unit, Ocado argues this was inventive in 2014 because prior clearance systems instructed robots to stop or turn to prevent an imminent collision, rather than provide clearance to traverse larger portions of the planned route and examine the potential for collisions in real time based on actual robot behavior. AutoStore provides no evidence to dispute these allegations.

Finally, Ocado argues that the dependent claims also include inventive concepts, such as the dynamic replanning elements of claims 5 and 9 (i.e. planning and routing a robot to an entirely different route if a possible collision is detected), which have particular importance on a grid-like storage system because they allow increased efficiency and ability to scale the grid. It also argues that the dependent claims describing aspects of the technology that withhold

⁴¹ The parties agree that mid-2014 is the relevant time period for the invention claimed by the '404 Patent because Ocado claimed priority to a British patent application for similar technology filed on June 3, 2014. See Doc. no. [35-21](#), at 13.

clearance by the clearance unit when there is a communications failure between the controller and the robot (claims 3-4, 6, and 10) contain inventive concepts because they addressed a novel problem in the context of stacked grid, fully automated storage systems. Again, AutoStore does not meaningfully answer these arguments at the motion to dismiss stage other than to argue that they are incorrect. AutoStore's parsing of Ocado's expert's description of the allegedly inventive aspects of the claims (Reply, at 12) also does not persuade the court, by clear and convincing proof, that there is "no genuine issue of material fact regarding whether the claim elements or claimed combination is well-understood, routine, [or] conventional to a skilled artisan in the relevant field." [Berkheimer](#), 881 F.3d at 1368.⁴²

While the court must accept as true Ocado's "plausible and specific factual allegations [in its complaint] that aspects of the claims are inventive," it cannot accept them if they are "wholly divorced from the claims or the specification." [Cellspin Soft, Inc. v. Fitbit, Inc.](#), 927 F.3d 1306, 1317 (Fed. Cir. 2019); [Teradata US, Inc.](#), 2021 WL 326930, at *5 ("The problem remains that the inventive concepts Teradata itself points to – the use of the virtual processors and the

⁴² While the court does not agree with Ocado that eligibility questions are per se premature at the motion to dismiss stage, its prematurity argument has some merit in the [Alice](#) Step Two context, particularly where, as here, there are factual disputes about whether the invention describes routine, well-understood, or conventional activities. See, e.g., [Iron Gate Sec., Inc. v. Lowe's Companies, Inc.](#), No. 15-CV-8814 (KBF), 2016 WL 4146140, at *14 (S.D.N.Y. Aug. 3, 2016) ("Accordingly, on this pleading stage motion, where the Court cannot resolve factual disputes as to whether the claimed invention truly adds to the prior art (or something categorically different from that which the human mind can perform), the Court must find that Iron Gate has sufficiently shown that the '693 Patent contains an inventive concept for purposes of [Alice](#) step two."); [Vineyard Investigations v. E. & J. Gallo Winery](#), No. 119CV01482NONESKO, 2021 WL 22497, at *12 (E.D. Cal. Jan. 4, 2021) ("The court agrees that the question of whether each of the claim elements of the Asserted Patents (including the control systems, sensors, or emitters), were well-understood, routine, and conventional at the time of the invention, is a question of fact that is not suitable for resolution by way of a motion to dismiss. This is particularly true where plaintiff's complaint (including the Patents themselves), plausibly alleges facts that would satisfy the second step of [Alice](#).")

‘controller’ – are not themselves captured by the claim language or described in the specification.”) (emphasis added). Here, Ocado’s allegations are not wholly divorced from the claims or the specification and there is a genuine dispute, based on this record and at this stage in the case, over whether the claimed combination of elements is routine or conventional. The motion to dismiss is accordingly denied, without prejudice to AutoStore’s ability to raise a § 101 challenge in a motion for summary judgment or at some other later stage in the case. [Fortinet, 2021 WL 2412995, at *5](#); see also [Sapphire Crossing LLC v. Quotient Tech. Inc., No. CV 18-1717-MN-CJB, 2020 WL 1550786, at *4 \(D. Del. Apr. 1, 2020\)](#) (“On the present record, there is a fact issue regarding whether the merging step amounts to an inventive concept (with Plaintiff having plausibly alleged that it does). Thus, the Court recommends that the District Court deny the Motions without prejudice to Defendants’ ability to raise a [Section 101](#) challenge at the summary judgment stage.”).

2. Direct infringement

AutoStore also argues that Ocado has insufficiently plead a claim for direct infringement of the ’404 Patent. Section [271\(a\)](#) of the Patent Act provides that “whoever without authority makes, uses, offers to sell, or sells any patented invention . . . during the term of the patent therefor, infringes the patent.” [35 U.S.C. § 271\(a\)](#); see also [Siemens Med. Sols. USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc., 637 F.3d 1269, 1290 \(Fed. Cir. 2011\)](#) (“One who ‘makes’ a patented invention without authorization infringes the patent.”). To succeed on a claim for direct infringement, the allegedly infringing product must practice all elements of a patent claim. [Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 \(Fed. Cir. 1995\)](#).

“A plaintiff is not required to plead infringement on an element-by-element basis.” [Bot M8 LLC v. Sony Corp. of Am., No. 2020-2218, 2021 WL 2932690, at *6 \(Fed. Cir. July 13,](#)

2021) (citing [Nalco Co. v. Chem-Mod, LLC](#), 883 F.3d 1337, 1350 (Fed. Cir. 2018) (“[T]he Federal Rules of Civil Procedure do not require a plaintiff to plead facts establishing that each element of an asserted claim is met.”). “Instead, it is enough ‘that a complaint place the alleged infringer on notice of what activity is being accused of infringement.’” [Bot M8 LLC](#), 2021 WL 2932690, at *6 (quoting [Lifetime Indus., Inc. v. Trim-Lok, Inc.](#), 869 F.3d 1372, 1379 (Fed. Cir. 2017)) (quotations and alteration omitted); see also [Bender v. LG Electronics U.S.A., Inc.](#), No. 09-cv-02114, 2010 WL 889541, at *6 (N.D. Cal. Mar. 11, 2010) (noting that “[s]ufficient allegations [under *Iqbal* and *Twombly*] would include, at a minimum, a brief description of what the patent at issue does, and an allegation that certain named and specifically identified products or product components also do what the patent does, thereby raising a plausible claim that the named products are infringing”). There must, however, “be some factual allegations that, when taken as true, articulate why it is plausible that the accused product infringes the patent claim.” [Bot M8 LLC](#), 2021 WL 2932690 at *7.

AutoStore argues that Ocado has failed to allege that its Router system practices the third and fourth elements of Claim 1 of the ’404 Patent. As for the third element, AutoStore asserts that Ocado has failed to allege that the Router reserves a path based on a pre-determined route, an alleged limitation of the reservation unit described in Claim 1. Regarding the fourth element, AutoStore argues that Ocado has failed to allege that the Router provides for future or later execution of commands, an alleged limitation of the clearance unit described in Claim 1. Neither argument persuades the court.

For the third element, Ocado has alleged facts in paragraphs 47, 74, 75, and 106 of its operative complaint (as examples only) from which the court can infer that the Router utilizes a reservation unit that reserves routes based on pre-planned or pre-determined routes. Regarding

the fourth element, the court similarly finds that Ocado has alleged sufficient facts from which the court can infer that the Router provides for future or later execution of commands. See, e.g., Second Amended Complaint, at ¶¶ 72, 106. These allegations are sufficient to state a claim for direct infringement that covers all elements of the '404 Patent and puts AutoStore on notice of the alleged infringing activity.

B. Willful infringement under § 284

AutoStore further argues that Ocado has failed to state a claim for willful infringement of the '404 Patent, as well as the other Asserted Patents. Section 284 of the Patent Act allows courts in certain cases to increase infringement damages “up to three times the amount found or assessed.” 35 U.S.C. § 284. Enhanced damages are generally “reserved for egregious cases typified by willful misconduct.” Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923, 1934 (2016).

AutoStore argues that this language from Halo and Justice Breyer’s concurring opinion in that case created a requirement that the plaintiff must plead egregious conduct in order to state a claim for willful infringement. The court disagrees. The Halo court did not address pleading requirements and neither the Federal Circuit nor this court have adopted a requirement to plead egregious conduct. Although district courts outside of the First Circuit have required plaintiffs to plead facts showing egregious conduct, courts within this circuit have not. Compare, Mich. Motor Techs. LLC v. Volkswagen Aktiengesellschaft, 472 F. Supp. 3d 377, 383–84 (E.D. Mich. 2020) (citing cases concluding that “an allegation of willful infringement without evidence of egregiousness is futile”), with, Bio-Rad Labs., Inc. v. 10X Genomics, Inc., No. 19-CV-12533-WGY, 2020 WL 2079422, at *6 (D. Mass. Apr. 30, 2020) (Young, J.) (declining to require plaintiff to allege egregious conduct at pleadings stage); Lexington Luminance LLC v. TCL

[Multimedia Tech. Holdings, Ltd.](#), No. 16-cv-11458-DJC, 2017 WL 3795769, at *6 (D. Mass. Aug. 30, 2017) (Casper, J.) (noting that “whether [a] plaintiff can ultimately show that it is entitled to enhanced damages for Defendants’ egregious infringement behavior is not relevant to the Court’s consideration of a motion to dismiss,” and “at this juncture, a plaintiff is not required to allege more than knowledge of the patent and of infringement”); [IOENGINE, LLC v. PayPal Holdings, Inc.](#), No. CV 18-452-WCB, 2019 WL 330515, at *7 (D. Del. Jan. 25, 2019) (noting that after [Halo](#), “courts in this district have held that it is not necessary for the plaintiff to plead that the defendant has engaged in some form of egregious conduct in order to avoid dismissal on the pleadings”).

Thus, while the court agrees that enhanced damages are “designed as a ‘punitive’ or ‘vindictive’ sanction for egregious infringement behavior,” that is, “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant” behavior or behavior that is “characteristic of a pirate,” the court follows other district courts in this circuit and will not require Ocado to separately plead egregious conduct in order to state a claim for willful infringement. [Halo](#), 136 S. Ct. at 1932.

AutoStore’s knowledge of the Asserted Patents. “Knowledge of the patent alleged to be willfully infringed,” however, is a “prerequisite to enhanced damages.” [WBIP, LLC v. Kohler Co.](#), 829 F.3d 1317, 1341 (Fed. Cir. 2016) (citing [Halo](#), 136 S. Ct. at 1932-33). Notably absent from Ocado’s complaint are any specific allegations that AutoStore had actual, pre-suit knowledge of each of the Asserted Patents. Instead, Ocado relies on circumstantial evidence of knowledge based on several “indicia,” including: (1) the competitive nature of the parties’ industry; (2) the fact that the parties explored a business relationship where Ocado disclosed certain technology and patent applications to AutoStore; (3) the chronology of AutoStore’s

product development; (4) AutoStore’s citation of other Ocado patents in its own patent applications; (5) AutoStore’s filing of oppositions to Ocado’s international counterparts to the Asserted Patents; (6) AutoStore’s filing of entitlement proceedings related to the ’404 Patent in the United Kingdom; (7) other overseas patent litigation; and (8) Ocado’s filing of inter partes review petitions against AutoStore’s patents, in which Ocado cited patents in the “same patent family” as the Asserted Patents.

AutoStore argues that this alleged knowledge is speculative and insufficient because Ocado does not allege that AutoStore cited any of the Asserted Patents in its own patent applications and because Ocado’s patent “portfolio” is vast (over 100 patents and applications). The court disagrees.

In [Bio-Rad Labs.](#), the court held that the complaint stated sufficient facts to infer pre-suit knowledge “given [the parties’] nature as competitors in a specialized market, previous patent litigation between [the parties] (involving different patents), and access to Harvard’s droplet patent portfolio.” 2020 WL 2079422, at *5; see also [Simplivity Corp. v. Springpath, Inc.](#), No. CV 4:15-13345-TSH, 2016 WL 5388951, at *9 (D. Mass. July 15, 2016) (Hennessy, M.J.) (fact that parties were competitors, the ease of online patent research, defendant and its representative’s surreptitious pre-suit investigation at a trade show of plaintiff’s technology, and defendant’s subsequent development of a product that mimicked the technology underlying the ’799 Patent – all of which occurred before the asserted patent issued – were sufficient to infer pre-suit knowledge). Ocado alleges similar circumstantial factors from which the court can infer AutoStore’s pre-suit knowledge here.

AutoStore cites a number of district court cases that have held that neither general knowledge of a patent portfolio nor actual knowledge of a patent application or of related

patents, without more, is sufficient to allege pre-suit knowledge of an asserted patent. See, e.g., Finjan, Inc. v. Cisco Sys. Inc., No. 17-CV-00072-BLF, 2017 WL 2462423, at *5 (N.D. Cal. June 7, 2017) (“Knowledge of a patent portfolio generally is not the same thing as knowledge of a specific patent.”) (citing Longitude Licensing v. Apple Inc., No. C-14-04275-EDL, 2015 WL 1143071, at *2 (N.D. Cal. Mar. 13, 2015) (granting motion to dismiss where complaint alleged that defendant “had knowledge of the Patents-in-Suit as part of the SanDisk patent portfolio”)); Finjan, Inc. v. Juniper Networks, Inc., 2018 WL 905909, at *3 (N.D. Cal. Feb. 14, 2018) (knowledge of other patent in family not enough); Bayer Healthcare LLC v. Baxalta Inc., 2017 U.S. Dist. LEXIS 126904, at *2-3 (D. Del. Aug. 10, 2017) (knowledge of parent application not enough). The court in Bio-Rad (an in-circuit decision), however, questioned this line of cases and did not adopt its principles. 2020 WL 2079422, at *4 (“The Federal Circuit, however, has cast doubt on these types of decisions.”). And here, Ocado has alleged more than general knowledge of a patent portfolio or related patents.

Alternatively, Ocado argues that these facts show willful blindness, which can also satisfy the knowledge requirement. Willful blindness has “two basic requirements”:

(1) The defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact. . . . Under this formulation, a willfully blind defendant is one who takes deliberate actions to avoid confirming a high probability of wrongdoing and who can almost be said to have actually known the critical fact.

Global-Tech Appliances v. SEB S.A., 563 U.S. 754, 769-70 (2011). Since the court finds that Ocado has alleged sufficient facts to infer AutoStore’s pre-suit knowledge of the Asserted Patents, it need not reach the willful blindness question. The court notes, however, that Ocado’s complaint is devoid of any allegation that AutoStore took affirmative, deliberate actions to avoid learning of Ocado’s patents or that AutoStore subjectively believed that Ocado’s asserted patents

existed. If Ocado intends to rely on a willful blindness theory to show pre-suit knowledge, it will have to produce evidence of these facts or risk dismissal of this theory at a later stage in the case.

Ocado has also alleged, and AutoStore concedes, that it has post-suit knowledge of the Asserted Patents. This is sufficient to support a claim for willful infringement for at least the alleged infringement that followed the initial filing of this lawsuit. See [Zond, Inc. v. Fujitsu Semiconductor Ltd.](#), 990 F. Supp. 2d 50, 58 (D. Mass. 2014) (Young, J.) (“Whilst the original pleading could not have satisfied the knowledge requirement, as Zond has amended its complaint, Fujitsu’s post-complaint knowledge of the patents-in-suit and their use by TSMC properly may be inferred.”); [IOENGINE, LLC](#), 2019 WL 330515, at *7 (finding allegations of post-suit knowledge sufficient to state a claim for willful infringement, and additional facts, beyond knowledge of the patent and continuing infringement despite that knowledge, are not needed to survive a motion to dismiss); see also [T-Rex Prop. AB v. Regal Ent. Grp.](#), No. 6:16-CV-1029-RWS-KNM, 2017 WL 4229372, at *8 (E.D. Tex. Aug. 31, 2017), report and recommendation adopted sub nom. [T-Rex Prop. AB v. Regal Ent. Grp.](#), No. 6:16-CV-1029-RWS-KNM, 2017 WL 4225441 (E.D. Tex. Sept. 22, 2017) (“Post-[Halo](#), courts in this district have deemed allegations of willful infringement based on post-complaint conduct sufficient to survive [Rule 12\(b\)\(6\)](#) scrutiny.”).

Egregious conduct. While the court does not read [Halo](#) as imposing an egregious conduct pleading requirement, it nevertheless finds that Ocado has sufficiently plead egregious conduct to support a willful infringement claim. For example, Ocado alleges that AutoStore released a “new” product, on an accelerated timely, that is suspiciously similar to Ocado’s technology, after meeting with Ocado representatives about a business relationship and touring its warehouse facility, which suggests it deliberately copied Ocado’s patented ideas and

designs.⁴³ Such deliberate copying, with knowledge of the asserted patents, is sufficient to state a willful infringement claim. See, e.g., Lexington Luminance LLC, 2017 WL 3795769, at *6 (finding pre-suit knowledge of patent and continued sale of infringing product despite this knowledge sufficient to state a claim for willful infringement); Bio-Rad Labs., 2020 WL 2079422, at *6 (same); RavenSafe, LLC v. Nexus Technologies, Inc., No. 1:19-cv-00105-MR, 2019 WL 4594197, at *5 (W.D.N.C. Sept. 20, 2019) (where complaint alleged that the defendants knew about the patents, knew about their infringement of those patents, and continued to engage in their infringing activities even though they were aware of the patents and their potential infringement of them, the plaintiff had adequately alleged egregious behavior); Read Corp. v. Portec, Inc., 970 F.2d 816, 826-27 (Fed. Cir. 1992) (noting one factor suggesting egregious conduct is whether the infringer deliberately copied the ideas or design of another).

“At a minimum, the discretion that Halo confers on district courts to award enhanced damages based on the nature of the specific misconduct in a given case counsels hesitation before dismissing allegations of willfulness at the pleading stage.” Bobcar Media, LLC v. Aardvark Event Logistics, Inc., 2017 WL 74729, at *6 (S.D.N.Y. Jan. 4, 2017). And the facts bearing on willfulness or egregiousness are likely to be, in large measure, in the possession of AutoStore and available to Ocado only through discovery, making dismissal inappropriate when Ocado has adequately (albeit marginally) alleged the requisite knowledge or egregious conduct. It is possible, however, that further factual development may reveal that AutoStore did not in fact have pre-suit knowledge of the Asserted Patents or that this is not an ‘egregious case’ justifying enhanced damages.

⁴³ See SAC, doc. no. 35, at ¶¶ 7, 13-22.

C. Induced infringement under § 271(b)

Finally, AutoStore argues that Ocado has failed to state a claim for induced infringement of the Asserted Patents. Under § 271(b) of the Patent Act, “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b). A plaintiff alleging inducement must show that the defendant both (1) “knew of the patent” and (2) knew as well “that the induced acts constitute patent infringement.” Commil USA, LLC v. Cisco Sys., Inc., 575 U.S. 632, 640 (2015) (quoting Global-Tech Appliances, Inc. v. SEB S.A., 563 U.S. 754, 766 (2011)); see also Lifetime Indus., Inc., 869 F.3d at 1379 (noting that for an induced infringement claim “to survive a motion to dismiss, a complaint must plead facts plausibly showing that the accused infringer ‘specifically intended [another party] to infringe [the patent] and knew that the [other party’s] acts constituted infringement.’”) (alterations in original). A defendant’s good-faith “belief regarding validity cannot negate the scienter required under § 271(b),” as the statutory language requiring that a defendant “actively induce[d] infringement” requires only an “intent to ‘bring about the desired result,’ which is infringement.” Commil, 575 U.S. at 642 (quoting Global-Tech, 563 U.S. at 760).

Knowledge of the patents. As with willful infringement, Ocado has sufficiently alleged both pre- and post-suit knowledge of the patents to support an induced infringement claim. See Canon, Inc. v. Avigilon USA Corp., Inc., 411 F. Supp. 3d 162, 165 (D. Mass. 2019) (Gorton, J.) (“[An original] complaint is sufficient to demonstrate actual knowledge in order to state a claim for inducement when limited to post-filing conduct only in a later-amended complaint.”). The court focuses its attention on the second part of the induced infringement test and finds that Ocado has alleged just enough facts to satisfy this element.

Specific intent to induce infringement and knowledge that the induced acts constitute infringement. “Evidence of active steps taken to induce infringement, such as

advertising an infringing use, can support a finding of an intention for the product to be used in an infringing manner.” [Lucent Technologies, Inc. v. Gateway, Inc.](#), 580 F.3d 1301, 1322 (Fed. Cir. 2009) (citing [DSU Med. Corp.](#), 471 F.3d at 1306); see also [In re Bill of Lading](#), 681 F.3d at 1341-42 (“Common sense indicates that advertising that your product can be used in conjunction with dispatch software to improve asset utilization and provide operational efficiency to the less-than-a-load shipping/trucking industry gives rise to a reasonable inference that you intend to induce your customers to accomplish these benefits through utilization of the patented method. This is sufficient to push the complaint past the line ‘between possibility and plausibility.’”). Similar evidence of active steps includes instructing others “how to engage in an infringing use.” [Vanda Pharm., Inc. v. West-Ward Pharm. Int’l Ltd.](#), 887 F.3d 1117, 1129 (Fed. Cir. 2018) (quoting [Takeda Pharm. U.S.A. v. West-Ward Pharm. Corp.](#), 785 F.3d 625, 630-31 (Fed. Cir. 2015)). Specific intent to encourage infringement can also “be shown by circumstantial evidence, but the mere knowledge of possible infringement will not suffice.” [Vita-Mix Corp. v. Basic Holding, Inc.](#), 581 F.3d 1317, 1328 (Fed. Cir. 2009).

Ocado alleges that AutoStore provided instructions, manuals, technical assistance, and promotional materials relating to the installation, use, operation, and maintenance of the accused products to unspecified business partners and customers in the United States.⁴⁴ These allegations are both boilerplate and conclusory. In cases where courts have found sufficient allegations of active steps to induce infringement, the complaints contained far more detailed allegations than those made here. See, e.g., [Lifetime Indus., Inc.](#), 869 F.3d at 1380 (“After Trim-Lok gained [knowledge of the Asserted Patent], Lifetime alleged that it then assisted in or directed the installation of exactly the same type of seal as the one described in the patent onto an RV at the

⁴⁴ See SAC, at ¶¶ 73-74, 90, 98, 105, 113.

Forest River plant. Lifetime alleged, moreover, that Trim-Lok never made or sold these particular seals prior to gaining that knowledge, and that the seals have no noninfringing use. Our precedent does not require Lifetime to do more” to plead an inducement claim); [IOENGINE, LLC](#), 2019 WL 330515, at *5 (“The complaint contains detailed references to the directions given by PayPal to its POS Partners and customers as to how to implement its software. Those references allege that PayPal provides software development kits that instruct and encourage the use of the infringing products, instructional support on its website, information and technical support on third-party platforms, and video instruction on PayPal's YouTube channel. Those references are amply sufficient to allege that PayPal instructs and encourages others to use the PayPal products in a manner that infringes. PayPal’s response that those detailed allegations are ‘unsubstantiated’ ignores the difference between allegations and proof”); but see [Dynacore Holdings Corp. v. U.S. Philips Corp.](#), 363 F.3d 1263, 1274 (Fed. Cir. 2004) (“Plaintiffs who identify an entire category of infringers (e.g., the defendant’s customers) may cast their theories of vicarious liability more broadly, and may consequently seek damages or injunctions across the entire category.”).

Ocado also alleges, however, that AutoStore has promoted the allegedly infringing products in the context of online grocery sales, which could be construed as an instruction to use the accused products in an infringing manner.⁴⁵ This is minimally sufficient to satisfy the second part of the inducement test. See [Bio-Rad Labs.](#), 2020 WL 2079422, at *7 (“Courts have also determined that advertising one’s product for a specific use constitutes induced infringement.”); [Fortinet](#), 2021 WL 2412995, at *16 (“These references to particular instructional materials, inclusion of URLs for those materials, and allegations that Fortinet ‘disclosed the existence of

⁴⁵ See SAC, at ¶¶ 18-22, with links to, and attachments of, the promotional materials.

the [asserted patents]’ to Forescout and that the materials ‘instruct customers to infringe each and every element of at least claim 1 of [each] Patent,’ id. ¶ 93, plausibly state a claim for induced infringement.”).

No substantial non-infringing use. In the inducement context, courts have recognized an additional factor supporting the inference of pre-suit knowledge and intent to induce infringement, namely, that the infringing products have no substantial non-infringing use. See, e.g., Zond, Inc. v. Fujitsu Semiconductor Ltd., 990 F. Supp. 2d 50, 58–59 (D. Mass. 2014) (post-filing inducement theory, based on conclusory allegations, yet court held that “it seems illogical that the production, for sale, of goods, for which there is no potential non-infringing use, would not permit a reasonable inference, especially at the motion to dismiss stage that the manufacturer/importer intended to encourage infringement.”) (emphasis added) (citing Lucent Techs., 580 F.3d at 1321-23); Vita-Mix Corp. v. Basic Holding, Inc., 581 F.3d 1317, 1329 (Fed. Cir. 2009) (“[W]here a product has substantial non-infringing uses, intent to induce infringement cannot be inferred even when the defendant has actual knowledge that some users of its product may be infringing the patent.”).

AutoStore counters that the no substantial non-infringement use factor is irrelevant because it only applies to contributory infringement claims. Zond and other decisions belie that assertion. See, e.g., Simplivity Corp., 2016 WL 5388951, at *15 (“In sum therefore, the combination of (1) plaintiff’s allegations of specific intent [that “Springpath specifically intends for its customers to use the Data Platform in an infringing manner, and actively entices them to do so Springpath’s intent to induce infringement is demonstrated through its continued promotion of its Data Platform product since learning of the '799 patent and its infringement.”]; and (2) the court’s inference that Data Platform lacks a substantial non-infringing use, compels

the conclusion that SimpliVity has satisfied the specific intent element” for inducement claim); [Bio-Rad Labs., 2020 WL 2079422](#), at *6-7 (“Taking as true that the specialized microfluidic device can only carry out the stated reactions and that these reactions infringe on Bio-Rad’s license and Harvard’s patents, Bio-Rad and Harvard have properly alleged no non-infringing use. Courts have also determined that advertising one’s product for a specific use constitutes induced infringement: Bio-Rad and Harvard note in their complaint that 10X has advertised and promoted the Next GEM platform.”).

AutoStore has no answer for the “no substantial non-infringing use allegation,” other than to call it conclusory, which does not suffice. Thus, accepting as true for purposes of this motion that AutoStore’s accused products have no substantial non-infringing uses, this fact also supports the inference of AutoStore’s pre-suit knowledge and intent to induce infringement. Ocado has plead sufficient facts to state a claim for induced infringement of all of the Asserted Patents.

IV. Conclusion

For the reasons set forth above, AutoStore’s partially renewed motion to dismiss⁴⁶ is DENIED.

SO ORDERED.


 Joseph N. Laplante
 United States District Judge

Dated: August 13, 2021

cc: Dustin Guzior, Esq.
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⁴⁶ Doc. no. [36](#).

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